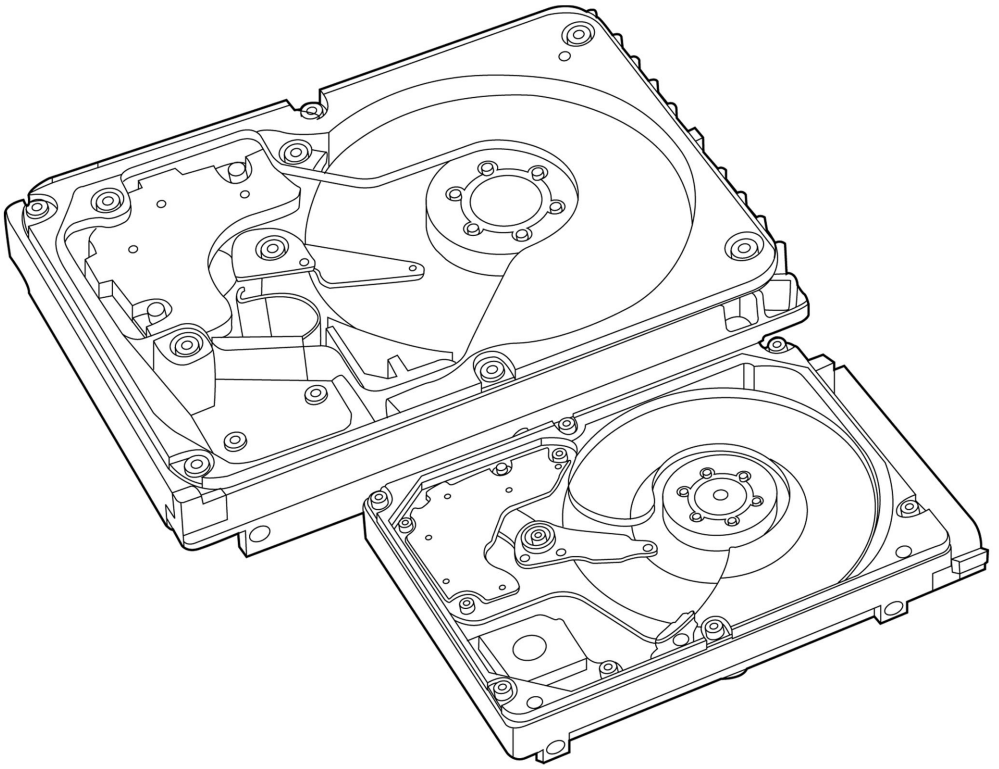
Overview

HP SATA drives are designed for the reliability and larger capacities demanded by today's entry server and external storage environments. The SATA portfolio is categorized into two categories: Entry (ETY) and Midline (MDL) drives. HP SATA Entry drives are the lowest unit-cost solution for entry-level servers. HP SATA Midline drives are designed with economical reliability and performance for external storage, backups and archival applications. These high capacity drives provide the lowest $/GB to our customers. Both Entry and Midline SATA drives provide the best price advantage for non-mission critical applications with low workloads of 40% or less. HP SATA drives are available in both Large Form Factor (LFF) (3.5-inch) and Small Form Factor (SFF) (2.5-inch) and ship with a standard one year warranty, 1,0,0.

All HP hard drives pass a rigorous qualification process, which ensures that every HP drive is proven to perform in your HP ProLiant server. Before final certification, all HP SATA hard drives are optimized for compatibility and functionality, including support of SMART and HP Systems Insight Manager.

*S.M.A.R.T.: Self Monitoring Analysis and Reporting Technology, first developed at HP, detects possible hard disk failure before it occurs, allowing replacement of the component before failure occurs.

NOTE: For additional information regarding the different features of SATA Entry drives please visit the SATA hard drive website: www.hp.com/go/SATA



Overview

What's New

- HP 6G SATA Hard Drives available with new HP SmartDrive carriers (for Gen8 Servers only). Also available in non-hot plug and non-hot plug quick release carriers supporting the full line of Gen8 Servers. 6G SATA interface offers up to 600 MB/s transfer speeds.
  - HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive
  - HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive
  - HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Hot Plug Midline 1yr Warranty Hard Drive
  - HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive
  - HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive
  - HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive
- HP 6G SATA Hard Drives (for Gen8 Servers only)
  - HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr Warranty Hard Drive
  - HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr Warranty Hard Drive
  - HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive
  - HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive
  - HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive
  - HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive
  - HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive
  - HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive
  - HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive

Models

NOTE: SATA Drive Write Cache is disabled by default to minimize the risk of data loss in case of power loss. For information on how to enable Drive Write Cache on SATA drives via supported controllers and HBAs and what precautions should be followed please visit: www.hp.com/go/SATA

NOTE: The components of a storage subsystem (e.g. the drive, the HBA/controller, firmware, and the server backplane) should operate at the same data transfer rate or the system bandwidth will be negotiated down to an acceptable level for all components.

HP SATA Hard Drives for Gen8 Servers only

6G SATA Hot Plug with Smart Drive SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655710-B21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) SC Midline 1yr Warranty Hard Drive	655708-B21

6G SATA Hot Plug with Smart Drive LFF (3.5-inch) Midline (MDL) Drives

HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	628061-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658079-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) SC Midline 1yr Warranty Hard Drive	658071-B21

6G SATA Non-hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	628065-B21
HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659339-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659337-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	659341-B21

6G SATA Quick Release SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr Warranty Hard Drive	632080-B21
HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr Warranty Hard Drive	632078-B21

6G SATA Quick Release LFF (3.5-inch) Midline (MDL) Drives

Overview

HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive	647274-B21
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive	672621-B21
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive	659349-B21

HP SATA with Smart Drive for Gen8 Servers only

HP SATA Hot Plug Hard Drives

SATA Hot Plug LFF (3.5-inch) Entry (ETY) Drives

HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Entry 1yr Warranty Hard Drive	571230-B21
HP 160GB 3G SATA 7.2K rpm LFF (3.5-inch) Entry 1yr Warranty Hard Drive	458945-B21

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Hot Plug Midline 1yr Warranty Hard Drive	625609-B21
HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Hot plug Midline 1yr Warranty Hard Drive S-Buy	625609-S21
HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive	507750-B21
HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive S-Buy	507750-S21

SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	628059-B21
HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	507632-B21
HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	454146-B21
HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive S-Buy	454146-S21
HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	458928-B21
HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive S-Buy	458928-S21

HP SATA Non-Hot Plug Hard Drives

NOTE: These drives are not supported by Gen8 servers.

SATA Non-Hot Plug SFF (2.5-inch) Entry (ETY) Drives

HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Non-hot plug Entry 1yr Warranty Hard Drive	628033-B21

SATA Non-Hot Plug LFF (3.5-inch) Entry (ETY) Drives

HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Entry 1yr Warranty Hard Drive	571232-B21

SATA Non-Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	507753-B21

SATA Non-Hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot plug Midline 1yr Warranty Hard Drive	628063-B21
HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	507774-B21
HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	507772-B21
HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	458941-B21

HP SATA Quick Release Hard Drives

NOTE: These drives are not supported by Gen8 servers.

SATA Quick Release SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Quick-release Midline 1yr Warranty Hard Drive	627632-B21
HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Quick-release Midline 1yr Warranty Hard Drive	574953-B21

SATA Quick Release LFF (3.5-inch) Midline (MDL) Drives

HP 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive	642098-B21
HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Quick-release Midline 1yr Warranty Hard Drive	574755-B21

Overview

HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Quick-release Midline 1yr Warranty Hard Drive	574025-B21
HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Quick-release Midline 1yr Warranty Hard Drive	574023-B21

NOTE: Please refer to the appropriate server QuickSpecs for full compatibility details regarding the Quick-Release hard drives.

Standard Features

Drive Quality	Today's entry-level servers and external storage solutions are seeing an increase in maximum storage capacity and demand for increased levels of drive quality. In the often-changing entry-level server and storage environment, storage has become a critical component of the information system, significantly defining both the systems reliability. This is why HP drives undergo an intense qualification process that eliminates firmware and O/S incompatibilities. All drives are proven to perform in the HP ProLiant and Modular Smart Array (MSA) storage systems for which they were designed.
Performance	Only those drives whose quality is suitable for an entry-level, external storage enclosures and server environments are selected through the HP qualification process. All our drives are proven to be reliable in the ProLiant server and MSA storage environment.
Integration	Many issues customers have with third party Serial-ATA drives are integration related issues. When buying from another supplier, there is no guarantee that a drive has been correctly set for proper operation with ProLiant entry-level servers or MSA enclosures. These incompatibilities can create problems in configuration, can rob your system of performance, or at their worst, can result in data corruption. HP hard drives are specifically designed and tested for flawless operation in your HP equipment. The integration of hard drives in HP systems means that cables, controllers, and firmware are right for your ProLiant entry level server or MSA enclosures.
Pre-Failure Alert	When used in conjunction with a SMART Array Controller and Systems Insight Manager, the SMART capable firmware in HP hard drives enables extensive fault prediction capabilities. If potential problems develop in one of the drives, the Smart Array Controller, Systems Insight Manager and/or SMART hard disk drive lets you know in advance so you can have the drive replaced, before it fails, under warranty. NOTE: All drives are protected by a Pre-Failure Alert when used with a HP Smart Array controller and Systems Insight Manager, allowing hard drives to be replaced before failure under warranty. In addition, all drives are covered by a 1 or 3 year limited on-site warranty, regardless of the warranty period of the system in which they are installed. However, the drive warranty is automatically uplifted when used in a server or MSA for which a care pack is purchased. Please see the below HP Care Pack Information section for additional services. NOTE: SATA hard drives have a 1 year limited warranty regardless of the warranty period for the system in which they are installed.
Server and Storage Support	Please see the following URL for the latest list of supported servers and enclosures: http://www.hp.com/servers/hdd-documentation

Service and Support

HP Technology Services

HP Technology Services offers you consultants and support experts to solve your most complex infrastructure problems. We help keep your business running, boost availability, and avoid downtime.

Protect your business beyond warranty with HP Care Pack Services

When you buy HP Options, it's also a good time to think about what level of service you may need. HP Care Pack services provide total care and support expertise with committed response choices designed to meet your IT and business need.

HP Foundation Care services deliver scalable support-packages for HP industry-standard servers and software. You can choose the type and level of service that is most suitable for your business needs. New to this portfolio is HP Collaborative Support. If you are running business critical environments, HP offers Proactive Care or Critical Advantage. These services help you deliver high levels of application availability through proactive service management and advanced technical response.

Here is the support service recommendation from the Foundation Care and Proactive Care portfolio. For customized support service solution, HP can work with you to tailor a service solution for your unique support requirements using broader services portfolio of Foundation Care and Proactive Care.

Recommended HP Care Pack Services for optimal satisfaction with your HP product

Recommended Services

3-Year HP 24x7 4 hour Response, Hardware Support Onsite Service

Provides you with rapid remote support and if required an HP authorized representative who will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged.
http://h20195.www2.hp.com/V2/GetPDF.aspx/5982-6547EEE.pdf

OR

3-Year HP 24x7 4 hour Response, HP Collaborative Support

Offers customers a single point of contact for server problem diagnosis, hardware problem resolution, and basic software problem diagnosis, fault isolation, and resolution if available to HP. If the problem is with HP HW, the representative will arrive on site any time and day of the year to begin hardware maintenance service within 4 hours of the service request being logged. In case, the issue is with HP or supported third-party software product and cannot be resolved by applying known fixes, HP will contact the third-party vendor and create a problem incident on your behalf.

HP ProLiant Server Hardware Installation

Provides for the basic hardware installation of HP branded servers, storage devices and networking options to assist you in bringing your new hardware into operation in a timely and professional manner
http://h20195.www2.hp.com/V2/GetPDF.aspx/5981-9356EN.pdf

Service and Support

Related HP Care Pack Services to enhance your HP product experience

Related Services	3-Year HP 24x7 4 hour Response, Proactive Care or Critical Advantage Helps optimize your systems and delivers high levels of application availability through proactive service management and advanced technical response. A skilled Technical Manager will own your query or issue end to end until resolved, delivering a single point of contact for you http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA3-2140ENW.pdf OR 3-Year HP 6-hour Onsite Call-to-Repair, HP Collaborative Support Offers customers a single point of contact for server problem diagnosis, hardware problem resolution to return the hardware in operating condition within 6 hours of the initial service request to the HP Global Solution Center, and basic software problem diagnosis, fault isolation, and resolution if available to HP. In case, the issue is with HP or supported third-party software product and cannot be resolved by applying known fixes, HP will contact the third-party vendor and create a problem incident on your behalf. HP Proactive Select Service Provides a flexible way to purchase HP best-in-class consultancy and technical services. You can buy Proactive Select Service Credits when you purchase your hardware and then use the credits over the next 12 months. http://h20195.www2.hp.com/V2/GetPDF.aspx/4AA2-3842ENN.pdf
Insight Remote Support	Provides 24 X 7 remote monitoring, proactive notifications, and problem resolution. Learn more http://www.hp.com/go/insightremotesupport
HP Support Center	Personalized online support portal with access to information, tools and experts to support HP business products. Submit support cases online, chat with HP experts, access support resources or collaborate with peers. Learn more http://www.hp.com/go/hpsc HP's Support Center Mobile App* allows you to resolve issues yourself or quickly connect to an agent for live support. Now, you can get access to personalized IT support anywhere, anytime. HP Insight Remote Support and HP Support Center are available at no additional cost with a HP warranty, HP Care Pack or HP contractual support agreement. *HP' Support Center Mobile App is subject to local availability
Parts and materials	HP will provide HP-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements. Supplies and consumable parts will not be provided as part of this service; standard warranty terms and conditions apply. Parts and components that have exceeded their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual or the technical product data sheet will not be provided, repaired or replaced as part of this service.

Service and Support

Warranty / Service Coverage	For ProLiant servers and storage systems, this service covers HP-branded hardware options qualified for the server, purchased at the same time or afterward, internal to the enclosure, as well as external monitors up to 22" and tower UPS products; these items will be covered at the same service level and for the same coverage period as the server unless the maximum supported lifetime and/or the maximum usage limitation has been exceeded. Coverage of the UPS battery is not included; standard warranty terms and conditions apply. The defective media retention service feature option applies only to Disk or eligible SSD/Flash Drives replaced by HP due to malfunction. It does not apply to any exchange of Disk or SSD/Flash Drives that have not failed. SSD/Flash Drives that are specified by HP as consumable parts and/or that have exceeded maximum supported lifetime and/or the maximum usage limit as set forth in the manufacturer's operating manual or the technical data sheet are not eligible for the defective media retention service feature option.
For more information	To learn more on services for HP ESSN Options, please contact your HP sales representative or HP Authorized Channel Partner. Or visit: http://www.hp.com/services/proliant or www.hp.com/services/bladesystem

6G SATA Non-hot Plug LFF (3.5-inch) Midline (MDL) Drives (Gen8 only)

HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	628065-B21	Capacity	3,000,592,982,016	
		Height	1.028 in (26.1 mm)	
		Width	4.00 in (101.6 mm)	
		Depth	5.75 in (146.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	6Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.5 ms
			Average	8.2 ms
			Full-Stroke	16.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	5,860,533,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

NOTE: To support HP hard drives exceeding 2.2 TB, HP Smart Array Firmware version 5.0 or later is required for the following controllers:

- HP Smart Array P212 Controller
- HP Smart Array P410 Controller
- HP Smart Array P411 Controller
- HP Smart Array P711m Controller
- HP Smart Array P812 Controller

To use hard drives exceeding 2.2 TB, you must create a boot volume using offline ACU version 8.75 or later. HP Smart Array controllers do not support boot volumes exceeding 2.2 TB.
Other controllers are not supported

Technical Specifications

HP 2TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	659339-B21	Capacity	2,000,398MB	
		Height	1.028 in (26.1 mm)	
		Width	4.00 in (101.6 mm)	
		Depth	5.75 in (146.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	6Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.5 ms
			Average	<8.5ms
			Full-Stroke	16.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	3,907,029,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	
HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	659337-B21	Capacity	500,107MB	
		Height	1.028 in (26.1 mm)	
		Width	4.00 in (101.6 mm)	
		Depth	5.75 in (146.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	6Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.5ms
			Average	<8.5 ms
			Full-Stroke	16.3ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

Technical Specifications

HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	659341-B21	Capacity	1,000,204MB	
		Height	1.028 in (26.1 mm)	
		Width	4.00 in (101.6 mm)	
		Depth	5.75 in (146.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	6Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.5 ms
			Average	<8.5 ms
			Full-Stroke	17.55 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	1,953,525,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

6G SATA Quick Release SFF (2.5-inch) Midline (MDL) Drives (Gen8 only)

HP 1TB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr Warranty Hard Drive	632080-B21	Capacity	500,107MB	
		Height	0.74 in (18.8mm)	
		Width	2.91 in (73.9 mm)	
		Depth	3.95 in (100.2 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	6Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.7ms
			Average	<8.5ms
			Full-Stroke	16.96ms
			Rotational Speed	7200
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

Technical Specifications

HP 500GB 6G SATA 7.2K rpm SFF (2.5-inch) Quick Release Midline 1yr Warranty Hard Drive	632078-B21	Capacity	500,107MB	
		Height	0.74 in (18.8mm)	
		Width	2.91 in (73.9 mm)	
		Depth	3.95 in (100.2 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	6Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.7ms
			Average	<8.5ms
			Full-Stroke	16.96ms
			Rotational Speed	7200
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

6G SATA Quick Release LFF (3.5-inch) Midline (MDL) Drives (Gen8 only)

HP 3TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive	647274-B21	Capacity	500,107MB	
		Height	1.16 in (29.6 mm)	
		Width	4.16 in (105.6 mm)	
		Depth	5.79 in (147.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	6Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.5ms
			Average	<8.5ms
			Full-Stroke	16.3ms
			Rotational Speed	7200
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

HP 1TB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard	672621-B21	Capacity	3,000,592,982,016	
		Height	1.16 in (29.6 mm)	
		Width	4.16 in (105.6 mm)	

Warranty Hard Drive		Depth	5.79 in (147.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	6Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.5 ms
			Average	<8.5 ms
			Full-Stroke	16.5 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	1,953,525,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	
HP 500GB 6G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive	659349-B21	Capacity	500,107MB	
		Height	1.16 in (29.6 mm)	
		Width	4.16 in (105.6 mm)	
		Depth	5.79 in (147.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	6Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.5ms
			Average	<8.5ms
			Full-Stroke	16.3ms
			Rotational Speed	7200
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

Technical Specifications

SATA Hot Plug LFF (3.5-inch) Entry (ETY) Drives

HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Entry 1yr Warranty Hard Drive	571230-B21	Capacity	250,059MB	
		Height	1.04 in (26.4 mm)	
		Width	4.36 in (110.7 mm)	
		Depth	7.25 in (184.2 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	2.0 ms
			Average	11 ms
			Full-Stroke	21.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	488,397,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

HP 160GB 3G SATA 7.2K rpm LFF (3.5-inch) Entry 1yr Warranty Hard Drive	458945-B21	Capacity	160,041MB	
		Height	1.04 in (26.4 mm)	
		Width	4.36 in (110.7 mm)	
		Depth	7.25 in (184.2 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	2.0 ms
			Average	<11 ms
			Full-Stroke	22.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	312,581,808
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

SATA Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 3G SATA 7.2K	625609-B21	Capacity	1,000,204MB

Technical Specifications

rpm SFF (2.5-inch) Hot plug Midline 1yr Warranty Hard Drive		Height	0.63 in (16.0 mm)	
		Width	3.00 in (72.2 mm)	
		Depth	5.38 in (136.6 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.7ms
			Average	<8.5ms
			Full-Stroke	16.96ms
			Rotational Speed	7200
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	1,953,525,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	
HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Midline 1yr Warranty Hard Drive	507750-B21	Capacity	500,107MB	
		Height	0.63 in (16.0 mm)	
		Width	3.00 in (72.2 mm)	
		Depth	5.38 in (136.6 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	.5 ms
			Average	8.2 ms
			Full-Stroke	17.55 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

SATA Hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	628059-B21	Capacity	3,000,592,982,016
		Height	1.04 in (26.4 mm)
		Width	4.36 in (110.7 mm)
		Depth	7.25 in (184.2 mm)

Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	0.5 ms
	Average	<8.1 ms
	Full-Stroke	15.5 ms
	Rotational Speed	7,200 rpm
Physical Configuration	Bytes/Sector	512
	Logical Blocks	5,860,533,168
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

NOTE: To support HP hard drives exceeding 2.2 TB, HP Smart Array Firmware version 5.0 or later is required for the following controllers:

- HP Smart Array P212 Controller
- HP Smart Array P410 Controller
- HP Smart Array P411 Controller
- HP Smart Array P711m Controller
- HP Smart Array P812 Controller

To use hard drives exceeding 2.2 TB, you must create a boot volume using offline ACU version 8.75 or later. HP Smart Array controllers do not support boot volumes exceeding 2.2 TB.
Other controllers are not supported

HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	507632-B21	**Capacity**	2,000,398MB	
		Height	1.04 in (26.4 mm)	
		Width	4.36 in (110.7 mm)	
		Depth	7.25 in (184.2 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	0.5 ms
			Average	<8.5 ms
			Full-Stroke	16.9 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	3,907,029,168

		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	
HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	454146-B21	**Capacity**	1,000,204MB	
		Height	1.04 in (26.4 mm)	
		Width	4.36 in (110.7 mm)	
		Depth	7.25 in (184.2 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	2.0 ms
			Average	<8.5 ms
			Full-Stroke	25.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	1,953,525,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	
HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Midline 1yr Warranty Hard Drive	458928-B21	**Capacity**	500,107MB	
		Height	1.04 in (26.4 mm)	
		Width	4.36 in (110.7 mm)	
		Depth	7.25 in (184.2 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	2.0 ms
			Average	<8.5 ms
			Full-Stroke	21.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

Technical Specifications

SATA Non-Hot Plug SFF (2.5-inch) Entry (ETY) Drives

HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Non-hot Plug Entry 1y Warranty Hard Drive	628033-B21	Capacity	500,107MB	
		Height	0.37 in (9.5 mm)	
		Width	2.75 in (69.85 mm)	
		Depth	3.94 in (100.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	1 ms
			Average	11 ms
			Full-Stroke	19ms
			Rotational Speed	7200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

SATA Non-Hot Plug LFF (3.5-inch) Entry (ETY) Drives

HP 250GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Entry 1yr Warranty Hard Drive	571232-B21	Capacity	250,059MB	
		Height	1.028 in (26.1 mm)	
		Width	4.00 in (101.6 mm)	
		Depth	5.75 in (146.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	2.0 ms
			Average	11 ms
			Full-Stroke	21.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	488,397,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

SATA Non-Hot Plug SFF (2.5-inch) Midline (MDL) Drives

HP 500GB 3G SATA	507753-B21	Capacity	500,107MB

Technical Specifications

7.2K rpm SFF (2.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive

Height	0.591 in (15.0 mm)	
Width	2.750 in (69.85 mm)	
Depth	3.937 in (100.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	.5 ms
	Average	8.2 ms
	Full-Stroke	17.55 ms
	Rotational Speed	7,200 rpm
Physical Configuration	Bytes/Sector	512
	Logical Blocks	976,773,168
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

SATA Non-Hot Plug LFF (3.5-inch) Midline (MDL) Drives

HP 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-Hot Plug Midline 1yr Warranty Hard Drive

628063-B21

Capacity	3,000,592,982,016	
Height	1.028 in (26.1 mm)	
Width	4.00 in (101.6 mm)	
Depth	5.75 in (146.0 mm)	
Interface	Serial ATA	
Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	0.5 ms
	Average	<8.1 ms
	Full-Stroke	15.5 ms
	Rotational Speed	7,200 rpm
Physical Configuration	Bytes/Sector	512
	Logical Blocks	5,860,533,168
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

NOTE: To support HP hard drives exceeding 2.2 TB on pre Gen8 servers, HP Smart Array Firmware version 5.0 or later is required for the following controllers:

- HP Smart Array P212 Controller
- HP Smart Array P410 Controller
- HP Smart Array P411 Controller

- HP Smart Array P711m Controller
- HP Smart Array P812 Controller

To use hard drives exceeding 2.2 TB, you must create a boot volume using offline ACU version 8.75 or later. HP Smart Array controllers do not support boot volumes exceeding 2.2 TB.
Other controllers are not supported

NOTE: Gen8 servers require Gen8 specific Smart Array Controllers

HP 2TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	507774-B21	Capacity	2,000,398MB	
		Height	1.028 in (26.1 mm)	
		Width	4.00 in (101.6 mm)	
		Depth	5.75 in (146.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	0.5 ms
			Average	<8.5 ms
			Full-Stroke	16.9 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	3,907,029,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	
HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	507772-B21	Capacity	1,000,204MB	
		Height	1.028 in (26.1 mm)	
		Width	4.00 in (101.6 mm)	
		Depth	5.75 in (146.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	2.0 ms
			Average	<8.5 ms
			Full-Stroke	25.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	1,953,525,168

		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	
HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Non-hot Plug Midline 1yr Warranty Hard Drive	458941-B21	**Capacity**	500,107MB	
		Height	1.028 in (26.1 mm)	
		Width	4.00 in (101.6 mm)	
		Depth	5.75 in (146.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	2.0 ms
			Average	<8.5 ms
			Full-Stroke	21.0 ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

SATA Quick Release SFF (2.5-inch) Midline (MDL) Drives

HP 1TB 3G SATA 7.2K rpm SFF (2.5-inch) Quick-release Midline 1yr Warranty Hard Drive	627632-B21	**Capacity**	1,000,204MB	
		Height	0.74 in (18.8 mm)	
		Width	2.91 in (73.9 mm)	
		Depth	3.95 in (100.2 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	0.7ms
			Average	<8.5ms
			Full-Stroke	16.96ms
			Rotational Speed	7200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	1,953,525,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

HP 500GB 3G SATA 7.2K rpm SFF (2.5-inch) Quick-release Midline 1y Warranty Hard Drive	574953-B21	Capacity	500,107MB	
		Height	0.74 in (18.8 mm)	
		Width	2.91 in (73.9 mm)	
		Depth	3.95 in (100.2 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	0.7ms
			Average	<8.5ms
			Full-Stroke	16.96ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	976,773,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

SATA Quick Release LFF (3.5-inch) Midline (MDL) Drives

HP 3TB 3G SATA 7.2K rpm LFF (3.5-inch) Quick Release Midline 1yr Warranty Hard Drive	642098-B21	Capacity	3,000,592MB	
		Height	1.16 in (29.6 mm)	
		Width	4.16 in (105.6 mm)	
		Depth	5.79 in (147.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	0.5ms
			Average	8.2ms
			Full-Stroke	16ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	5,860,533,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

HP 2TB 3G SATA 7.2K	574755-B21	Capacity	2,000,398MB	

Technical Specifications

rpm LFF (3.5-inch) Quick-release Midline 1yr Warranty Hard Drive		Height	1.16 in (29.6 mm)	
		Width	4.16 in (105.6 mm)	
		Depth	5.79 in (147.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	0.5ms
			Average	<8.5ms
			Full-Stroke	16ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	3,907,029,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	
HP 1TB 3G SATA 7.2K rpm LFF (3.5-inch) Quick-release Midline 1yr Warranty Hard Drive	574025-B21	Capacity	1,000,204MB	
		Height	1.16 in (29.6 mm)	
		Width	4.16 in (105.6 mm)	
		Depth	5.79 in (147.0 mm)	
		Interface	Serial ATA	
		Transfer Rate (Maximum)	3Gb/s	
		Native Command Queuing	Supported	
		Seek Time (typical reads, including settling)	Single Track	0.5ms
			Average	<8.5ms
			Full-Stroke	16.5ms
			Rotational Speed	7,200 rpm
		Physical Configuration	Bytes/Sector	512
			Logical Blocks	1,953,525,168
		Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	
HP 500GB 3G SATA 7.2K rpm LFF (3.5-inch) Quick-release Midline 1yr Warranty Hard Drive	574023-B21	Capacity	500,107MB	
		Height	1.16 in (29.6 mm)	
		Width	4.16 in (105.6 mm)	
		Depth	5.79 in (147.0 mm)	
		Interface	Serial ATA	

Transfer Rate (Maximum)	3Gb/s	
Native Command Queuing	Supported	
Seek Time (typical reads, including settling)	Single Track	0.5ms
	Average	<8.5ms
	Full-Stroke	16.3ms
	Rotational Speed	7,200 rpm
Physical Configuration	Bytes/Sector	512
	Logical Blocks	976,773,168
Operating Temperature (system inlet air temperature)	50° to 95° F (10° to 35° C)	

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